Manitz & Finsterwald Partner
Gesellschaft des bürgerlichen Rechts

Manitz, Finsterwald & Partner ▪ Postfach 31 02 20 ▪ 80102 München

European Patent Office
Erhardtstrasse 27
80298 Munich

Ort, Datum / Place, Date: Munich, April 6, 2005
Unser Zeichen / Our Ref.: E2797PWO - Mr/La

File ref.: PCT/EP 2004/013462

Applicant: Hartmut S. Engel

In response to the written official letter of the International Search Authority of February 2, 2005:

We herewith enclose

- new claims 1 to 16, and
- hand-written revised description pages 1, 2, 4 - 6, 8, 10, 12 - 15 and new description pages 2a to d and 3,
- including the new Figs. 1 and 2 which are identical to the originally filed Figs. 1 and 3.

The originally filed Fig. 2 was removed without replacement. We request that the named documents, which take account of the criticisms of the initially named official letter, be used as the basis for the future

München ▪ Alicante
▪ Patent- und Rechtsanwälte
▪ European Patent Attorneys
▪ European Trademark Attorneys
▪ European Design Attorneys

▪ Deutsche Patentanwälte
European Patent, Trademark and Design Attorneys

Dr. Gerhart Manitz
▪ Dipl.-Phys.

Manfred Finsterwald
▪ Dipl.-Ing., Dipl.-Wirtsch.-Ing.

Dr. Heliane Heÿn
▪ Dipl.-Chem.

Dr. Martin Finsterwald
▪ Dipl.-Ing.

Stephan Thul
▪ Dipl.-Phys.

Dr. Dieter Pellkofer
▪ Dipl.-Ing.

Christian Schmidt
▪ Dipl.-Phys.

Günther Kurz
▪ Dipl.-Ing.

Jörg Ewert
▪ Dipl.-Phys.

Oliver Fries
▪ Dipl.-Phys.

Dr. Sebastian Schaefer
▪▪ Dipl.-Phys.

Dr. Christoph Lettau
▪ Dipl.-Phys.

▪ British and European Patent, Trademark and Design Attorney

James G. Morgan
▪ B. SC. (Phys.), D.M.S.

▪ Rechtsanwälte
Marion C. Finsterwald
Anita Singh
Günter Hallwachs

▪ Postfach 31 02 20
80102 München

Martin-Greif-Str. 1
80336 München

Deutschland/Germany

Tel. +49-89-21 99 430
Fax +49-89-29 75 75

e-mail manitz@patente.de
Internet www.patente.de

▪ Martin-Greif-Str. 1
80336 München
Tel. +49-89 21 99 430
Deutschland
Germany

▪ Paseo Explanada
de España No. 3
5-dcha
03002 Alicante
España

▪ HypoVereinsbank München
Kto. 6 880 119 980
BLZ 700 202 70
SWIFT CODE (BIC) HYVEDEMM
IBAN DE 35 70020270 6880119980

▪ Postbank München
Kto. 770 62-805
BLZ 700 100 80
▪ Vat.-No.
DE 130 001 124

▪▪ Deutscher Patentanwalt
European Trademark Attorney
European Design Attorney

international examination procedure together with the originally filed description pages 7, 9, 11 and 16.

1. Disclosure

In the introduction to the description, the prior art DE 101 12 055 A1 and GB 1 102 270 A were taken into account, with the paragraph bridging pages 2 and 3 of the originally filed description being used on pages 2a and 2b of the new description.

The second paragraph of page 5 of the originally filed description was used for the explanation of the document DE 101 12 055 A1 in the second paragraph of page 2b of the new description.

The description of the originally filed Fig. 2 was removed without replacement.

Otherwise, the complete description was adapted to the newly filed claims, with the following having to be noted with respect to their disclosure:

The new claim 1 additionally contains the features of the originally filed claims 7 and 9 in the preamble.

The characterizing portion of the new claim 1 refers back to the first sentence of the second paragraph of page 11 of the originally filed description, where it is mentioned that the plate 13, together with the direct light reflector secured to it, is releasable from the housing or from the frame. The feature in accordance with which the diffuse light discharge region is terminated by a plate can be

seen from the paragraph of the originally filed description which bridges pages 9 and 10. It is also in particular disclosed there that the direct light discharge region can be made either likewise terminated by the plate or also open.

The features of the new claims 2 to 4 can also be seen from the last-named test passage.

The remaining claims 5 to 16 were matched to the new claims 1 to 4 with respect to their numbering. In addition, it was also added to the claims 5, 6 and 8 that the second reflector region, together with the plate, is movable or releasable from the housing, as is required by the newly worded claim 1.

It was included in claim 13 that the additional reflector is in particular rotationally symmetrically curved, as is disclosed in the 1st paragraph of page 7 of the original description.

2. Patentability

In accordance with the newly submitted claim 1, the present invention relates to a built-in lamp which also has a diffuse light discharge region in addition to a direct light discharge region. In this respect, document DE 101 12 055 A1 (D1) is to be considered the closest prior art since, in accordance with this document, two elongated diffuse light discharge regions are disclosed which extend on both sides of an elongated direct light discharge region.

The surface luminaire in accordance with DE 101 12 055 A1 in accordance with Fig. 1 specifically discloses an elongated direct

light reflector which consists of two side reflectors 11, 12. A unit reception 9 is present above the side reflectors 11, 12 and is made to be reflective in its region facing a bulb 10 and thus forms an additional reflector. Light passage regions are located between the additional reflector and the direct light reflector 11, 12 through which a light portion can pass which is ultimately used for the generation of glare-free, diffuse illumination.

The direct light reflector 11, 12 is acted on directly and immediately by a light portion coming from a bulb 10 and is used for the generation of direct illumination. This direct illumination takes place via an elongated reflector opening of the direct light reflector 11, 12 which is fitted with transversely extending lamellae 14 and forms a direct light discharge region.

At both sides of this direct light discharge region, elongated diffuse light discharge regions 16, 16' likewise extend which are acted on by a light portion which has previously passed through the named light passage region between the additional reflector and the direct reflector 11, 12.

The fact is disadvantageous in the surface luminaire known from the document DE 101 12 055 A1 that it can only be manufactured with a relatively high effort and cost since the two diffuse light discharge regions, which extend at both sides of the direct light discharge region, have to be made in a complex and costly manner from a respective light-transmitting especially shaped element which extends in each case over the total length of the surface luminaire. Each of the two light-transmitting especially shaped elements must be separately connected to the lamp housing at a

plurality of positions so that the named elements then ultimately form a closed chamber, which cannot be opened easily, together with the housing. The two chambers can consequently only be cleaned while accepting a high effort and cost. Specifically, it is necessary for the cleaning of a surface luminaire in accordance with DE 101 12 055 A1 first to release the direct light reflector from the housing, whereupon then the two light-transmitting elements each forming a diffuse light discharge region have to be dismantled.

In addition to the high manufacturing effort and cost, there is consequently also a disadvantageously high maintenance effort and cost.

It is moreover of substantial disadvantage that the illumination principle shown in DE 101 12 055 A1 can only be used with surface luminaires, but in contrast not with downlights

An object of the invention consists of further developing a built-in lamp, which can in particular be used as a downlight, in accordance with the preamble of the new claim 1 in a simple manner such that an economically advantageous manufacture and maintenance of the lamp is even possible when an advantageous, glare-free diffuse light discharge region is present in addition to a direct light discharge region.

This object is satisfied in accordance with the invention in that the diffuse light discharge region is terminated by a plate which can be released, together with the direct light reflector secured to it, from a housing or from a frame of the built-in lamp.

A unit is provided by the association of the direct light reflector with the plate terminating the diffuse light discharge region which is easy to handle and which can be released or pivoted away from the housing without problem in one single workstep, whereupon all inner regions of the housing are accessible for cleaning purposes and also for the purpose of changing a bulb. No separate chambers are associated with the diffuse light discharge region; it is rather the case that the diffuse light discharge region and the direct light discharge region, which are separate from one another, are provided in a surprisingly simply manner via the association of the plate and the direct light reflector. Consequently, both the manufacturing costs and the maintenance effort can be substantially reduced in accordance with the invention with respect to the prior art. A design of the lamp in accordance with the invention as a downlight is also possible without problem in that the plate and the direct light reflector are given corresponding shapes.

An embodiment of a built-in lamp of such advantage is in no way made obvious by document D1.

The remaining documents present in the proceedings are also not suitable to give the skilled person corresponding stimulation, in particular since these documents do not disclose any diffuse light discharge region which is, however, of considerable importance for the subject matter of claim 1, since this diffuse light discharge region is terminated in accordance with the invention by a plate which simultaneously carries the direct light reflector which then in turn defines the direct light discharge region.

We thus request the issuing of a positive international preliminary examination communication when taking the aforesaid recitations into account.

Manitz, Finsterwald & Partner

Patent Attorney
Dr. Martin Finsterwald

Enclosures:
New claims 1 to 16,
Handwritten revised description pages 1, 2, 4 - 6, 8, 10 and 12 - 15,
New description pages 2a to d and 3,
New Figs. 1 and 2
(in triplicate in each case)